An Overview of NASA SPoRT JPSS Proving Ground & Risk Reduction Program Activities

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The NASA SPoRT Program supports the NOAA/JPSS program through the transition of S-NPP VIIRS and CrIS/ATMS products to prepare users for the upcoming JPSS-1/-2 missions. Activities include use of multispectral (i.e., RGB) imagery by Alaska Region WFOs and the transition of the capability to create client-side VIIRS RGB imagery on-demand within AWIPS. An increased number of S-NPP passes at high latitude combined with other instruments led to a series of “microphysical” RGBs to be introduced to NWS forecasters in Alaska at both local weather offices as well as regional aviation centers. Forecasters in Alaska also applied VIIRS microphysical RGBs to identify small scale features such as valley/coastal fog, volcanic ash, and convective precipitation. In addition, the gridded CrIS/ATMS NUCAPS products were introduced to and demonstrated at the Alaska Region CWSU and AAWU to anticipate cold air aloft. Although the gridded CrIS/ATMS NUCAPS products were developed to identify cold air aloft as an aviation hazard, forecasters expressed interest in using the products to identify temperature and moisture characteristics in the pre-convective environment and therefore were evaluated at the Hazardous Weather Testbed. Other activities include demonstration of the utility of CrIS/ATMS NUCAPS Soundings for anticipating tropical to extratropical transition events. Forecasters from National Centers evaluated the NUCAPS Soundings as a tool for anticipating extratropical transition during the latter half of the 2016 hurricane season. Examples of multispectral and sounding product impacts in near-realtime operations from VIIRS and CrIS/ATMS are presented here as well as future plans for demonstration of these products at NOAA testbeds.